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## THE REPRESENTATIONAL APPROACH TO ADJECTIVE PLACEMENT IN POLISH\*

This paper gives an outline of the representational theory formulated in Bouchard (1998, 2002) to account for the location and interpretation of adjectives in French and English. It presents the application of Bouchard's theory to Russian (in Trugman 2010, 2011) and then shows how this approach can be employed for a description of adjectival modification in Polish.

### 1. Introduction

The issue of providing a proper cross-linguistic description of adjectival modification has attracted considerable attention in formal linguistics within the past thirty years (see for instance, Willim 2000a for a brief survey of various approaches to adjectival modification in generative grammar). The representational theory formulated by Denis Bouchard (cf. Bouchard 1998, 2002) is a proposal of how to account for adjective placement in Romance and Germanic languages (mainly French and English). In the present paper an attempt is made to employ Bouchard's theory for describing adjective placement in Slavonic languages, focusing on Polish.

Section 2 of this article offers an introduction to the semantic classification of adjectives (familiar from Kamp and Partee 1995), which is relevant for their position within noun phrases. Section 3 describes some basic assumptions of Bouchard's theory, including his Linearization Parameter. Section 4 discusses Bouchard's proposal concerning the difference in semantic Number assignment in French and English. Section 5 mentions Trugman's account of semantic Number coding in Russian and extends it to Number marking in Polish. Section 6 shows

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\* This article is dedicated to the memory of my longtime friend and collaborator, Helen Trugman, who passed away in September 2012.

how the representational theory can be employed to predict adjective placement in Polish, in particular the position of classifying adjectives. Conclusions are formulated in section 7.

## 2. Semantic typology of adjectives

From the point of view of their semantic interpretation, adjectives can be divided into three main types: intersective, subsective and non-intersective non-subsective ones (see Kamp 1975, Kamp and Partee 1995, Partee 2007). This typology will be described in the present section on the basis of examples taken from English.

If an intersective adjective  $\beta$  combines with a noun  $\gamma$ , the resulting expression  $\alpha$  denotes sets of individuals which are both  $\beta$  and  $\gamma$  (thus the extension of  $\alpha$  is the intersection of the sets representing the extension of  $\beta$  and  $\gamma$ ). The semantic value of the expression consisting of an intersective adjective and a noun is the intersection of the semantic value of the adjective and the semantic value of the noun, as is shown in (1).

(1) **Intersectivity:**  $\| \text{sick N} \| = \| \text{sick} \| \cap \| \text{N} \|$

For intersective adjectives, the following entailment pattern holds:

- (2) a. Mary is a sick teacher.  
       b.  $\vdash$  Mary is sick.  
       c.  $\vdash$  Mary is a teacher.

(2a) entails both (2b) and (2c), i.e. Mary's being a sick teacher entails that she is sick and that she is a teacher.

A different pattern of entailments is proposed for subsective modifiers in Kamp and Partee (1995). This class of adjectives is heterogenous. A subgroup of subsective modifiers consists of so-called scalar adjectives,<sup>1</sup> such as *large*, *small*, *short* or *tall*. While (3a) entails (3c), it does not entail (3b).

- (3) a. John is a short basketball player.  
       b.  $\not\vdash$  John is short.  
       c.  $\vdash$  John is a basketball player.

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<sup>1</sup> In Siegel (1976) scalar adjectives are regarded as intersective but vague and context-dependent adjectives. While such subsective adjectives as *skillful* can occur in the frame "Adj as a N", e.g. "skillful as a dancer", scalar adjectives occur with *for*-phrases, e.g. "big for a mouse", "small for a giant".

The lack of entailment (3b) results from the necessity to take a comparison class into account. (3b) involves a general comparison class since it states that John belongs to the set of short human beings. The sentence in (3a), on the other hand, asserts that John is short among basketball players (who are much taller than the average). The semantic value of an expression consisting of a subsecutive modifier and a noun is a subset of the semantic value of the noun in question (see McNally to appear).

(4) Subsectivity:  $\| \text{short N} \| \subseteq \| \text{N} \|$

Another subgroup of subsecutive adjectives subsumes adjectives which do not modify an individual directly but modify some event or property related to the head noun. For instance, in the sentence *Mary is a skillful surgeon*, the subsecutive adjective *skillful* does not refer to Mary as a human being but to her performance as a surgeon. She may be hopeless as a cook, a dancer, or a violinist. Consequently, the inference pattern characteristic of intersective modifiers cannot be applied to subsecutive modifiers, as shown in (5), modified after Partee (2007, ex. 2).

(5) Mary is a skillful surgeon.

Mary is a dancer.

Mary is a skillful dancer. [Not valid]

The next class of modifiers are neither intersective nor subsecutive. Non-intersective non-subsecutive adjectives are also termed “intensional” (as in McNally to appear). They are divided into two subtypes in Partee (2007): “plain” non-subsecutive ones (*alleged, possible, likely*) and privative adjectives (*fake, former, counterfeit*). In the case of “plain” non-subsecutive adjectives, no inference is licensed at all, e.g. an alleged thief may be either a criminal or an honest person. Privative adjectives entail the negation of the property denoted by the head noun, since a former president is not a president at the moment.

(6)  $\| \text{former N} \| \neq \| \text{former} \| \cap \| \text{N} \|$

$\| \text{former N} \| \not\subseteq \| \text{N} \|$

It has been observed by several researchers (e.g. Bernstein 1993, Cinque 1994) that there occurs some correlation between semantic types of adjectives and their position in a noun phrase in Romance languages. Bouchard (1998, 2002) claims that such a correlation is rather weak (especially when an attempt is made to apply it cross-linguistically), hence he develops a representational theory of adjectival modification, which will be described in the next section.

### 3. Adjectival modification in Bouchard (1998, 2002): French vs. English

The theory presented in Bouchard (1998, 2002) assumes that the placement of adjectives differs cross-linguistically since it results from an interaction of several principles. To start with, languages vary in selecting distinct ways of expressing semantic relations between the head and its dependent. Bouchard distinguishes four ways in which such a semantic relation can be signalled in oral languages (as opposed to sign languages) between two units, i.e. A and B.

(7) Ways to give a form to semantic relations in an oral language:

- (i) *Juxtaposition* – A and B are ordered temporally next to one another; deriving structural relation of sister and immediately contain.
- (ii) *Superimposition* – B is a modulation superimposed on A, such as intonations to express grammatical functions in tone languages.
- (iii) *Dependent Marking* – the dependent gets a marking, such as Case marking.
- (iv) *Head Marking* – the head is marked, as in predicate marking (polysynthetic languages). (Bouchard 2002: 38)

Various Germanic and Romance languages (including English and French) use Juxtaposition to express grammatical relations. The order between the functor (i.e. the head) and its dependent is determined mainly by the Linearization Parameter, given below.

(8) Linearization Parameter:

The functor precedes/follows its dependent. (Bouchard 2002: 60).

In French and in English the Central Linearization Parameter is set in such a way that the head is expected to precede its dependent, i.e. its argument or modifier.

(9) In French, the functor category precedes its dependent. (Bouchard 2002: 61)

With reference to adjectival modification, the parameter predicts that the adjective should follow its head (i.e. the noun). However, this is true of such intersective adjectives in French, as those describing shape or colour. Intensional adjectives (e.g. French *futur* 'future' or *faux* 'false') precede the head. Bouchard (2002: 63) explains that this results from the Elsewhere application of the Linearization Parameter, which is necessary in the case of adjectives targeting only a subpart of the head noun.

In agreement with the tradition of Montague Semantics, Bouchard assumes that a semantic entry for a common noun consists of a network of several inter-

acting elements (or “functions”). The following elements (or sub-components) of N are identified:

- (10) – a characteristic function  $f$  which provides the property that interprets the N (“a measure of the degree to which an object falls in the extension of a given concept”, Kamp & Partee 1995:131);
- a specification for a time interval  $i$ , which tells at what moment  $f$  holds;
  - an indication of the possible world  $w$  which allows us to know whether  $f$  holds in the “actual” world or in some other imagined world in which  $f$  is not necessarily false;
  - a variable assignment function  $g$ , that allows us to determine the truth value of the final formula by associating each variable with a particular entity in the model. (Bouchard 2002: 7-8)

Bouchard adds the following explanatory comment:

- (11) This network of elements determines the set of things that have the property of being a  $f$  in  $w$  at  $i$ , i.e., in our example, the extension of *mammal*, the variable assignment function  $g$  determines the denotation of the expression. An ADJ like *carnivorous* also defines a set on the basis of a property. Combining the adjective with the noun produces a new nominal whose extension is the intersection of the two sets defined by its parts. (Bouchard 2002: 8)

A post-head adjective in French modifies the components of the head noun as a whole. It combines with the head N “as a fully closed-off functor category” (Bouchard 1998: 139). This is exemplified, for instance, by the intersective adjective *faux*, used in (12a) in the sense of ‘out of tune’. The same adjective *faux* occurs in (12b) as an intensional one, as it modifies a component internal to N, namely the possible world  $w$ .

- (12) Pre-N adjective modifies the possible world  $w$
- a. *des pianos faux* ‘pianos that are out of tune’
  - b. *de faux pianos* ‘false (fake) pianos’ (from Bouchard 1998: 144)

The pre-head adjectives in (13) also modify subcomponents of N: while *futur* ‘future’ in (13a) modifies the time interval  $i$ , *supposé* ‘alleged’ in (13b) modifies the denotation assignment function  $g$ , and *bon* ‘good’ in (13c-d) modifies the property interpreting the N.<sup>2</sup>

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<sup>2</sup> Bouchard (2002) points out that all adjectives can be interpreted intersectively in his theory: either intersective with the whole complex denoted by the noun, or with some subcomponent(s) of N.

- (13) a. *le futur président* ‘future president’  
 b. *ce supposé communiste* ‘that alleged Communist’  
 c. *un bon chef* ‘a good chef’ (good for cooking)  
 d. *un bon couteau* ‘a good knife’ (good for cutting) (Bouchard 1998: 140, 142)

As is explained in Bouchard (1998: 141), “*bon* restricts the set that the interpretation of the nominal expression *un bon chef/ un bon couteau* relies on: this set will consist in things that can efficiently fulfill the property interpreting the N *chef/couteau*”. Thus, the adjective in question is interpreted on an internal scale and precedes the head noun in (13c-d) but it follows the head N and is interpreted on an external reference scale in (14).

- (14) *un chef bon* (good on a broader scale, as a human being) (from Bouchard 1998: 142)

The Central Linearization Parameter and its Elsewhere condition predict the position of adjectival modifiers in French, but are not able to explain (by themselves) why both intensional, subsective and intersective adjectives in English occur in the pre-head position (cf. *future president*, *good knife*, *round table*). Bouchard (1998, 2002) proposes that the difference between the position of adjectival modifiers in French and English follows from a difference in the mode of expressing semantic Number in the two languages under comparison, as will be shown below in section 4.

#### 4. Semantic Number marking in French and English

As pointed out in Bouchard (2002: 172), semantic Number<sup>3</sup> is taken to be “a minimal means to atomize a set (denoted by a property) and provide access to individuals”. According to Bouchard (1998, 2002), semantic Number in French is coded at a phrasal level of the nominal, i.e. it is obligatorily audibly marked on a Determiner (see 15a). It may be visible on more than one element, i.e. on the Determiner, Adjective and Noun, since N(oun) and ADJ(ective) can get Number marking by agreement (e.g. in 15b). In contrast, Number in English is coded at the word level on a Noun. It is expressed by marking the N morphologically; it cannot be coded on a Det(erminer) in English, since the Det forms an independent syntactic head (as in the noun phrase *the President’s wife*).

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<sup>3</sup> The word “number” is capitalized here when referring to semantic Number (as in Bouchard 2002), in order to distinguish it from morphological number.

## (15) French:

- a. *l'ami* [lami] – *les amis* [lezami]  
the friend – the PLUR friend (from Bouchard 2002: 41)
- b. *le loyal cheval* ‘the loyal horse’ – *les loyaux chevaux* ‘the loyal horses’

(16) English: *dog* – *dogs*, *ox* – *oxen*

Bouchard (1998: 160, 2002: 42-43) discusses a number of syntactic contrasts between French and English which indicate the above-mentioned difference in Number realization in both languages.<sup>4</sup> He observes that noun ellipsis is frequent in languages which code Number on the Determiner (such as French, in 17a) while it is not allowed in languages where Number is coded on a Noun (as in English, cf. 17b). English requires the presence of either a common noun (e.g. *the red blouse*) or the pro-form *one*.

## (17) Noun ellipsis

- a. *Donnes-moi la rouge.* (French)
- b. *\*Give me the red.* (English)
- c. *Give me the red one.* (English) (cf. Deprez 2006, ex. 1c)

On the other hand, the Determiner ellipsis is possible in English, which allows for the occurrence of bare (i.e. determiner-less) argument nominals. In French, the ellipsis of the determiner is very restricted because this particular element of a noun phrase is necessary for semantic Number coding.

## (18) Determiner ellipsis

- a. *\*Je mange pommes.* (French)
- b. *I eat apples* (English) (cf. Deprez 2006, ex. 1d)

Moreover, English does not allow for [V+N] compounds, whereas French does.

## (19) Compounding

- a. *l'ouvre-boîte* [V+N] (French)
- b. *\*the open-can* [V+N] (English)
- c. *the can-opener* [N+V+er] (English)

A single determiner can be used with two nouns or noun phrases to refer to two individuals in English, but not in French. Both languages allow a single

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<sup>4</sup> Such syntactic contrasts are also discussed in Deprez (2006).



determiner to be used with two nouns referring to a single individual, as illustrated in (20).

(20) Coordination

- a. *La secrétaire de Jean et collaboratrice de Paul est/ \*sont à la gare.*  
(only one referent who is both a secretary and a collaborator)
- b. *The secretary of John and collaborator of Paul is/? are at the station.*  
(possibly two referents) (from Bouchard 2002: 43, ex. 36)

Finally, determiners (including articles, demonstratives and possessives) can be conjoined to indicate Number uncertainty in French, but not in English.

(21) Conjoined determiners

- a. *Prends une ou des pommes.*
- b. *?? Take a or some apples.* (Bouchard 1998: 160)

Bouchard (1998) asserts that there is a difference between the scopal domain of Number in French and English, which follows from the condition given in (22).

(22) The Number Scope Condition

The element that codes Number in a nominal expression must have scope over the elements that determine the extensity of the expression. (Bouchard 1998: 161)

In French, Number may have scope over the pre-head adjective directly, and over the post-head adjective – indirectly (since the Determiner is a part of the functor category that has scope over elements to its right). In English, Number is coded as a word-final morphological head (i.e. an inflectional ending) on a Noun, so it can only have scope over elements which occur to its left, such as pre-N adjectives. Consequently, English has no post-N bare (complementless) adjectives.<sup>5</sup>

In French the pre-N and post-N position of adjectives corresponds to whether they modify the whole N or a subpart of N. In English, the Noun forms a component with the Number, represented as [N+Num]. Adjectives in English are predicted to be prenominal since the Linearization parameter applies in the Elsewhere mode. Consequently, English adjectives always modify a part of the nominal [N+Num] node, which is either the Noun alone (as in *red shirts*) or a subpart of N (as in *the future president*).

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<sup>5</sup> English stage-level adjectives are exceptional in this respect, as shown by the sentence *The materials ready will be shipped* (see Bouchard 1998: 162, footnote 12).

## 5. Semantic Number marking in Russian and Polish

An attempt to apply Bouchard's representational theory to a Slavonic language, namely to Russian, is made in Trugman (2010, 2011). She assumes that Russian uses Juxtaposition to express grammatical relations, and the head precedes its dependents (as in French and English). She also suggests that semantic Number is coded on the Noun in Russian, though morphologically it is visible on the dependents of the noun (i.e. adjectives, demonstratives, possessives). Trugman applies a number of tests proposed in Bouchard (1998, 2002), and presented in (15-21) above to check whether semantic Number is marked on the Noun or on the Determiner. It is shown in Trugman (2010) that Russian behaves partly like English, partly like French, with respect to those tests.

In Russian, like in English, number is obligatorily marked morphologically on the noun, as is illustrated by the comparison of the singular and plural forms such as *sestra* 'sister' and *sestry* 'sisters', or *doč* 'daughter' and *dočeri* 'daughters'. Russian adjectives are also marked for number, since they need to agree with their head nouns with respect to case, gender and number marking. Russian resembles English in not deriving [V+N] compounds<sup>6</sup> with V(erb) heads, as shown in (23).

- (23) \**kol-o-ljod*  
break-o-ice (in the reading of *ledokol* 'an icebreaker') (from Trugman 2010, ex. 3)

Similarly to English (and contrary to French), Russian allows for coordination of nouns with a single determiner (e.g. a demonstrative).

- (24) *Èta/ \*Èti pročnost' i ustojčivost' peredajutsja*  
this/ these firmness<sub>SG</sub> and steadiness<sub>SG</sub> are-transmitted<sub>PL</sub>  
*vsemu ego telu.*  
whole his body  
'This firmness and steadiness are transmitted to his whole body.'  
(from Trugman 2010, ex. 4a)

Noun ellipsis is common in Russian, just as in French (but unlike English).

- (25) *Mne ne nravjatsja želtje rozy, ja ljublju krasnye.*  
*me<sub>DAT</sub> not like<sub>REFL</sub> yellow roses, I like red*  
'I don't like yellow roses; I love red \*(ones).' (Trugman 2010, ex. 5)

<sup>6</sup> Trugman (2010) adds that there exist few exceptional V+N compounds in Russian, e.g. *sorvigolova* 'daredevil, madcap'

Since there are no overt articles in Russian, determiner ellipsis is the default case (while in French it is restricted). Coordination of determiners is marginally possible in Russian, as can be shown for possessives in (26).

- (26) *Ja ne predam ni moego, ni tvoix družej.*  
 I not betray neither mine<sub>SG</sub> nor your<sub>PL</sub> friend<sub>PL</sub>  
 ‘I won’t betray either my friend or yours.’ (Trugman 2010, ex.7b)

Trugman (2010, 2011) observes that there is no one-to-one correspondence between morphological and semantic Number on Russian nouns. She provides examples of Russian nouns which, although marked for number morphologically, ought to be treated as being non-atomized, i.e. underspecified for semantic Number.

- (27) a. *žavoronok stepnoj bol’šoj* (scientific terms/ labels)  
 lark field<sub>ADJ</sub> large  
 ‘a large field lark’  
 b. *Vas’ka — durak besprosvetnyj!* (characterizing predicates)  
 Vas’ka — fool total  
 ‘Vas’ka is an absolute fool!’  
 c. *P’jan’ podzabornaja!* (exclamations)  
 drunkard under-fence<sub>ADJ</sub>  
 ‘Lying-in-the-gutter drunkard!’ (Trugman 2010, ex.6)

Morphologically default number can be signalled in Russian either by the singular or plural form (depending on pragmatic factors).

- (28) *Deti prišli v školu bez portfelja. On/ oni*  
 Children<sub>PL</sub> came<sub>PL</sub> to school without bag<sub>SG</sub> it<sub>SG</sub>/ they<sub>PL</sub>  
*im byl/ byli ne nužen/ nužny v tot den’.*  
 them was/ were not necessary<sub>SG</sub>/ necessary<sub>PL</sub> in that day  
 ‘Children came to school without schoolbags. They didn’t need it/them that day.’ (Trugman 2010, ex. 20b)

Consequently, Trugman (2010, 2011) proposes her SNEPR parameter to express an important distinction between the occurrence of number morphology and the lack or presence of semantic Number marking in Slavonic languages, such as Russian.

- (29) Semantic Number Encoding Parameter in Russian (SNEPR)  
 Unavoidable morphological number marking in Russian does not necessarily signify semantic Number encoding and can signal morphologically default number realization of a non-atomized noun. (Trugman 2010)

A similar parameter can be proposed for Polish, where morphological marking can occur either with nouns which are atomized (i.e. provided with semantic Number) or non-atomized. Cetnarowska, Pysz and Trugman (2011a) argue that semantic number in Polish is assigned to N(oun) and is realized morphologically on its dependents (e.g. adjectives).

With respects to tests for semantic Number marking, Polish patterns like Russian since it partly resembles English, and partly French. For instance, in nominal compounds containing a nominal and (de)verbal constituent, the latter typically follows the noun, as in (30). Compound nouns which show the V+N structure (as in 31) are less numerous and they exemplify an older word-formation pattern, which is now unproductive.

- (30) a. *lod-o-lamacz* [N+interfix+(V+suffix)] (and not \**lam-o-lód*)  
ice-o-breaker (and not \**break-o-ice*)  
b. *kork-o-ciąg* [N+interfix+V] (and not \**ciąg-o-korek*)  
cork-o-pull (and not \**pull-o-cork*)
- (31) a. *dusigrosz* ‘penny-pincher’ (lit. strangle-penny) [V+N]  
b. *wyrwirączka* ‘ski-tow’ (lit. pull-out handle) [V+N]

Coordination of nouns with a single demonstrative is possible in Polish, as is illustrated in (32).

- (32) *Ta otwartość i życzliwość wobec nieznanym mu osob*  
this openness and kindness towards unknown him person  
‘this openness and kindness towards people unknown to him’

Noun ellipsis is common in Polish, since adjectives do not need to be followed by pro-forms.

- (33) *Anna nie lubi białych kozaczków i zawsze kupuje czarne.*  
Ann not likes white high-boots and always buys black  
‘Ann does not like white knee-high boots and always buys black ones.’

Coordination of determiners (e.g. possessives or demonstratives) is possible in Polish, as in (34).

- (34) *Ani moje ani twoje dzieci nie zasłużyły na nagrodę.*  
neither my nor your children not deserved on prize  
‘Neither my nor your children deserved the prize.’

## 6. Different modes of composition between the head N and adjectives in Polish

Cetnarowska, Pysz and Trugman (2011a, 2011b) show how Bouchard's representational theory can be used to account for adjective placement in Polish. They propose that the Central Linearization Parameter is set in Polish in the same way as in English and French: the functor (head) precedes its dependent. This could imply that adjectives in Polish obligatorily follow nouns. However, semantic Number is coded on the Noun in Polish, and it can be visible on the noun's dependents (by agreement marking). Consequently, Number can have scope over elements which occur to its left, and this assumption predicts the pre-nominal position of all types of adjectives in Polish.

As was suggested by Bouchard (1998, 2002) for English, the Noun in Polish forms a component with semantic Number, i.e. [N+Num]. Cetnarowska, Pysz and Trugman (2011a, 2011b) argue that prenominal adjectives in Polish modify such atomized nouns (i.e. nouns which are assigned semantic Number). Due to the Elsewhere application of the Linearization Parameter, the pre-head adjective modifies a subpart of the [N+Num] complex. This may be a subpart of N (e.g. the denotation assignment function *g*), as in the case of intensional adjectives in (35).

- (35) a. *falszywy ksiądz* 'fake priest'  
       b. *rzekomy ojciec* 'alleged father'

Alternatively, pre-head adjectives can modify a subpart of the [N+Num] complex which corresponds to the whole N. Prenominal adjectives in (36) exhibit a qualifying (descriptive) function and modify all the sub-components of N (as identified in 10 in section 3). Such adjectives are intersective (cf. Willim 2000a, 2000b), for instance the nominal expression *szary płaszcz* 'a grey coat' denotes an intersection of the set of coats and the set of grey objects.

- (36) a. *szary płaszcz* 'grey coat'  
       b. *słodkie maliny* 'sweet raspberries'  
       c. *małe dziewczynki* 'little girls'

Some prenominal adjectives exhibit a classifying function. When combining with a noun, they form an expression which denotes a kind of what is denoted by the head N, e.g. *mięsożerne ssaki* 'carnivorous mammals' are a kind (type) of mammals. This particular classifying adjective is intersective (as Partee 2007 observes for its English equivalent, i.e. *carnivorous*). It is also true of the other adjectives in (37).

- (37) a. *mięsożerne ssaki* 'carnivorous mammals'  
       b. *dalekobieżny autobus* 'long-distance bus'  
       c. *sezonowa praca* 'seasonal work'

However, the most common position of classifying modifiers in Polish is the post-head position, as shown in (38). For instance, the nominal expression *labędź niemy* ‘mute swan’ denotes a kind of swans.

- (38) a. *labędź niemy* (lit. swan mute) ‘mute swan’  
 b. *labędź krzykliwy* (lit. swan clamorous) ‘Whooper swan’  
 c. *foka szara* (lit. seal grey) ‘grey seal’  
 d. *sklep spożywczy* (lit. shop food<sub>ADJ</sub>) ‘grocery’

The classifying post-head adjectives in (38) are subsecutive, as is shown by the sentences given in (39).

- (39) a. *Labędź niemy nie jest zawsze niemy.* ‘The mute swan is not always mute.’  
 b. *Ten labędź krzykliwy był bardzo cichy.* ‘This Whooper swan was very quiet.’  
 c. *Młode foczki szare pokryte są białym futrem, a stare osobniki są prawie czarne.* ‘Young grey seals (i.e. pups of grey seals) have white fur, while old seals are nearly black.’

In order to predict that Polish classifying adjectives can follow their head nouns, Cetnarowska, Pysz and Trugman (2011a, 2011b) propose that such adjectives merge with non-atomized nouns (i.e. with nouns which are not assigned semantic Number). Therefore, they are able to establish a whole-to-whole relation with non-atomized nouns, and the Central Linearization Parameter predicts them to follow their functors.

This solution may appear implausible at first sight, because the nouns modified by the classifying post-head adjectives in (38-39) exhibit visible morphological number marking. However, as was demonstrated for Russian in Trugman (2010, 2011), it can be argued for Polish that morphological number marking does not necessarily correspond to semantic Number coding. Moreover, it can be assumed that a post-head adjective and a head N form a complex predicate [N+ClassA]<sub>N</sub>, which can then be assigned semantic Number as a unit.<sup>7</sup>

Prenominal and postnominal classifying adjectives in Polish exhibit different modes of composition with nouns. Prenominal classifying modifiers merge with atomized Ns, while postnominal adjectives combine with non-atomized (Numberless) Ns. The semantic interpretation of post-head and pre-head classifying

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<sup>7</sup> Cetnarowska, Pysz and Trugman (2011b) provide arguments supporting the proposal that postnominal classifying adjectives merge with non-atomized nouns. They point out that the formation of [N+ClassA] complex predicate is not possible when the N is saturated by a genitive phrase complement.

adjectives is similar,<sup>8</sup> since both of them modify all the sub-components of N, i.e. they establish a whole-to-whole relation with nouns.

- (40) a. *dalekobieżny autobus* ‘long-distance bus’ [A+N]    a.’ *autobus dalekobieżny* [N+A]  
       b. *sezonowa praca* ‘seasonal work’ [A+N]                b.’ *praca sezonowa* [N+A]  
       c. *mięsożerne ssaki* ‘carnivorous mammals’ [A+N]    c.’ *ssaki mięsożerne* [N+A]  
       d. *nocny sklep* ‘night shop’ [A+N]                    d.’ *sklep nocny* [N+A]

One could also mention here yet another type of classifying adjectives, which occur as constituents of idiomatic expressions, such as those in (41).

- (41) a. *boża krówka* (lit. God<sub>ADJ</sub> cow<sub>DIM</sub>) ‘ladybird’  
       b. *koński ogon* (lit. horse<sub>ADJ</sub> tail) ‘ponytail’  
       c. *lwia paszcza* (lit. lion<sub>ADJ</sub> jaw) ‘snapdragon’

The adjective *boży* ‘related to God’ (derived from *Bóg* ‘God’) is not an intersective modifier in (41a) since the semantic value of the expression *boża krówka* (lit. God<sub>ADJ</sub> cow<sub>DIM</sub>) ‘ladybird’ is not the intersection of the semantic value of the adjective *boży* ‘related to God’ and the noun *krówka* ‘little cow’. Such [A+N] combinations as *boża krówka* and *koński ogon* are analysed in Cetnarowska, Pysz and Trugman (2011a) as lexical idioms,<sup>9</sup> in which adjectives occur in whole-to-part relation with N(ouns).

## 7. Conclusion

This paper presented briefly basic principles of the representational approach to adjective modification, which was postulated by Bouchard (1998, 2002) in order to account for the difference between adjective placement in French and English. The contrast between the realization of semantic Number in both languages, proposed by Bouchard, was described and illustrated. The distinction

<sup>8</sup> As observed in Cetnarowska, Pysz and Trugman (2011a), there is a slight difference in the interpretation of [A+N] and [N+A] units containing classifying adjectives in Polish since the [A+N] phrases are perceived as less formal while [N+A] units are typical of scientific discourse.

<sup>9</sup> Such an analysis does not exclude the possibility of recognizing metaphorical motivation in lexical idioms, as in *koński ogon* ‘ponytail’ and *lwia paszcza* ‘snapdragon’. However, the semantic value of this expression is not an intersection of the set of objects related to a horse and the set of tails.

was explained between adjectival modification at the level of non-atomized Nouns (before the assignment of semantic Number to the nominal predicate) and at the level of atomized Nouns. This distinction was shown to be correlated with semantic typology of adjectives (i.e. the division into intersective, subsective and non-intersective non-subsective modifiers). Then an analysis of Polish adjectival modification was postulated within the framework of Bouchard's representational theory.

Following the account of adjective placement in Russian outlined in Trugman (2010, 2011), it is assumed here that morphological number marking does not always indicate the assignment of semantic Number on Polish nouns. While the Elsewhere application of Bouchard's Linearization Parameter predicts that all adjectival modifiers in Polish should occur prenominally, it is argued above that the post-head position, typical of classifying adjectives in Polish, results from the difference between adjectival modification at the level of atomized nouns and non-atomized nouns. As in Cetnarowska, Pysz and Trugman (2011a, 2011b), a distinction is recognized in the present paper between three types of classifying adjectives (resulting from various modes of composition between the head N and classifying adjectives). In the case of post-head classifying adjectives in Polish, it is argued that they modify non-atomized nouns, with which they form a complex nominal predicate. Semantic Number is assigned and interpreted on such a complex [N+ClassA] unit as a whole. Prenominal classifying adjectives, similarly to qualifying adjectives, combine with atomized nouns. They modify a part of the [N+Num] complex but stand in a whole-to-whole relation with N(ouns). Prenominal classifying adjectives which occur as constituents of lexical idioms modify a part of N (sharing this behaviour with non-intersective non-subsective adjectives).

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